IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS MARSHALL DIVISION

XR COMMUNICATIONS, LLC, dba VIVATO TECHNOLOGIES, Plaintiff, Case No. 2:23-cv-00202-JRG-RSP v. (Lead Case) AT&T SERVICES INC.; AT&T MOBILITY LLC; and AT&T CORP., JURY TRIAL DEMANDED Defendants, NOKIA OF AMERICA CORPORATION, Intervenor. XR COMMUNICATIONS, LLC, dba VIVATO TECHNOLOGIES, Plaintiff, v. Case No. 2:23-cv-00203-JRG-RSP VERIZON COMMUNICATIONS INC., (Member Case) CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS,

NOKIA OF AMERICA CORPORATION'S AMENDED ANSWER AND COUNTERCLAIMS IN INTERVENTION

Defendants,

Intervenor.

NOKIA OF AMERICA CORPORATION,

Intervenor Nokia of America Corporation ("Nokia" or "Intervenor"), hereby amends its Answer and Counterclaims to the Complaint of Plaintiff XR Communications, LLC dba Vivato Technologies' ("XR" or "Plaintiff") against Defendants Verizon Communications, Inc., Cellco Partnerships d/b/a Verizon Wireless (collectively, "Defendants" or "Verizon"), as follows:

SCOPE OF NOKIA'S ANSWER IN INTERVENTION

Nokia's use of headings in this Answer in Intervention is for convenience only and is not an admission as to any of Plaintiff's allegations in the Complaint.

Nokia further denies that any patent claims in this action are valid or enforceable. Nokia further reserves the right to amend or supplement its Answer in Intervention based on any additional facts or developments that become available or that arise after the filing of this Answer in Intervention.

Nokia denies each and every allegation averred in the Complaint that is not expressly admitted below. Any factual allegation admitted below is admitted only as to the specific admitted facts, and not as to any purported conclusions, characterizations, implications, or speculations that might follow from the admitted facts.

INTRODUCTION

- 1. Nokia admits that the Complaint purports to make a claim for patent infringement of U.S. Patent Nos. 8,737,511 (the "'511 Patent"), 10,715,235 (the "'235 Patent"), 10,594,376 (the "376 Patent"), 7,177,369 (the "369 Patent"), and 8,289,939 (the "939 Patent"), and collectively refers to the patents as the "Asserted Patents." Nokia lacks knowledge or information sufficient to form a belief as to the ownership of the Asserted Patents. Nokia denies that Verizon has infringed any of the Asserted Patents through Verizon's use of Nokia equipment. To the extent this paragraph contains any additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.
- 2. Nokia admits that electronic devices connect to the Internet wirelessly and allow people to communicate with each other. Nokia lacks knowledge or information sufficient to form a belief as to the truth of the remaining allegations of Paragraph 2, and therefore denies the same.

- 3. Nokia admits that Guglielmo Marconi was granted a British Patent (No. 12039), but denies that it occurred in 1896. Nokia admits that British Patent (No. 12039) was titled "Improvements in Transmitting Electrical impulses and Signals, and in Apparatus therefor." Nokia admits that Guglielmo Marconi shared the Nobel Prize in Physics with Karl Ferdinand Braun in 1909. Nokia lacks knowledge or information sufficient to form a belief as to the truth of the remaining allegations of Paragraph 3, and therefore denies the same.
- 4. Nokia admits that Guglielmo Marconi shared the Nobel Prize in Physics with Karl Ferdinand Braun in 1909. Nokia admits that Karl Ferdinand Braun gave a Nobel Lecture dated December 11, 1909. Nokia lacks knowledge or information sufficient to form a belief as to the truth of the remaining allegations of Paragraph 4, and therefore denies the same.
- 5. Nokia admits that Karl Ferdinand Braun is credited with inventions related to radio waves. Nokia admits that Karl Ferdinand Braun's December 11, 1909 Nobel Lecture described his experiments with antennas. Nokia lacks knowledge or information sufficient to form a belief as to the truth of the remaining allegations of Paragraph 5, and therefore denies the same.
- 6. Nokia lacks knowledge or information sufficient to form a belief as to the truth of the allegations of Paragraph 6, and therefore denies the same.
- 7. Nokia lacks knowledge or information sufficient to form a belief as to the truth of the allegations of Paragraph 7, and therefore denies the same.
- 8. Nokia lacks knowledge or information sufficient to form a belief as to the truth of the allegations of Paragraph 8, and therefore denies the same.
- 9. Nokia lacks knowledge or information sufficient to form a belief as to the truth of the allegations of Paragraph 9, and therefore denies the same.

THE PARTIES

- 10. Nokia lacks knowledge or information sufficient to form a belief as to the truth of the allegations of Paragraph 10, and therefore denies the same.
- 11. Nokia lacks knowledge or information sufficient to form a belief as to the truth of the allegations of Paragraph 11, and therefore denies the same.
- 12. Nokia lacks knowledge or information sufficient to form a belief as to the truth of the allegations of Paragraph 12, and therefore denies the same.
- 13. Nokia lacks knowledge or information sufficient to form a belief as to the truth of the allegations of Paragraph 13, and therefore denies the same.
- 14. Nokia lacks knowledge or information sufficient to form a belief as to the truth of the allegations of Paragraph 14, and therefore denies the same.
- 15. Nokia lacks knowledge or information sufficient to form a belief as to the truth of the allegations of Paragraph 15, and therefore denies the same.
- 16. Nokia lacks knowledge or information sufficient to form a belief as to the truth of the allegations of Paragraph 16, and therefore denies the same.
- 17. Nokia lacks knowledge or information sufficient to form a belief as to the truth of the allegations of Paragraph 17, and therefore denies the same.
- 18. Nokia lacks knowledge or information sufficient to form a belief as to the truth of the allegations of Paragraph 18, and therefore denies the same.
- 19. Nokia lacks knowledge or information sufficient to form a belief as to the truth of the allegations of Paragraph 19, and therefore denies the same.

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JURISDICTION AND VENUE

- 20. Nokia admits that the Complaint purports to state a claim for patent infringement arising under Title 35 of the United States Code. Nokia admits that this Court has subject matter jurisdiction over patent-law claims generally pursuant to 28 U.S.C. §§ 1331 and 1338(a).
- 21. To the extent that the allegations of Paragraph 21 of the Complaint set forth legal conclusions, no response is required. Nokia denies that Verizon has infringed any of the Asserted Patents through Verizon's use of Nokia equipment. Nokia lacks knowledge or information sufficient to form a belief as to the truth of the remaining allegations of Paragraph 21 concerning personal jurisdiction over Verizon, and therefore denies the same.
- 22. To the extent that the allegations of Paragraph 22 of the Complaint set forth legal conclusions, no response is required. Nokia denies that Verizon has infringed any of the Asserted Patents through Verizon's use of Nokia equipment. Nokia lacks knowledge or information sufficient to form a belief as to the truth of the remaining allegations of Paragraph 22, and therefore denies the same.
- 23. To the extent that the allegations of Paragraph 23 of the Complaint set forth legal conclusions, no response is required. Nokia denies that Verizon has infringed any of the Asserted Patents through Verizon's use of Nokia equipment. Nokia, however, does not contest that venue in this District is proper pursuant to 28 U.S.C. § 1400(b) for purposes of this action only; but it does deny that this is the most convenient forum in which to try this case. Nokia lacks knowledge or information sufficient to form a belief as to the truth of the remaining allegations of Paragraph 23, and therefore denies the same.
- Nokia lacks knowledge or information sufficient to form a belief as to the truth of 24. the allegations of Paragraph 24, and therefore denies the same.

- 25. Nokia lacks knowledge or information sufficient to form a belief as to the truth of the allegations of Paragraph 25, and therefore denies the same.
- 26. Nokia lacks knowledge or information sufficient to form a belief as to the truth of the allegations of Paragraph 26, and therefore denies the same.

COUNT I INFRINGEMENT OF U.S. PATENT NO. 8,737,511

- 27. No response is required to Plaintiff's reference and incorporation of Paragraphs above. To the extent a response is deemed required, Nokia repeats and incorporates by reference, as if fully set forth herein, their answers to Paragraphs 1-26, as set forth above.
- 28. Nokia admits that Exhibit 1 to the Complaint purports to be a true and correct copy of U.S. Patent No. 8,737,511 (the "'511 Patent") entitled "Directed MIMO Communications." Nokia lacks knowledge or information sufficient to form a belief as to the truth of the remaining allegations of Paragraph 28, and therefore denies the same.
- 29. Nokia denies that Verizon has infringed any of the referenced claims of the '511 Patent through Verizon's use of Nokia equipment. To the extent this paragraph contains any additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.
- 30. Nokia denies that Verizon has infringed any of the referenced claims of the '511 Patent through Verizon's use of Nokia equipment. To the extent this paragraph contains any additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.
- 31. Nokia denies that Verizon has infringed any of the referenced claims of the '511 Patent through Verizon's use of Nokia equipment. To the extent this paragraph contains any

additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.

Document 109

- 32. Nokia admits that Exhibit 2 attached to the Complaint purports to be a claim chart related to the '511 Patent. Nokia denies the remaining allegations in Paragraph 32 of the Complaint.
- 33. Nokia denies that Verizon has infringed any of the referenced claims of the '511 Patent through Verizon 's use of Nokia equipment. To the extent this paragraph contains any additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.
- 34. Nokia denies that Verizon has infringed any of the referenced claims of the '511 Patent through Verizon's use of Nokia equipment and therefore denies that Plaintiff is entitled to any relief. To the extent this paragraph contains any additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.
 - 35. Nokia denies the allegations in Paragraph 35 of the Complaint.
 - Nokia denies the allegations in Paragraph 36 of the Complaint. 36.

COUNT II INFRINGEMENT OF U.S. PATENT NO. 10,715,235

- 37. No response is required to Plaintiff's reference and incorporation of Paragraphs above. To the extent a response is deemed required, Nokia repeats and incorporates by reference, as if fully set forth herein, their answers to Paragraphs 1-36, as set forth above.
- 38. Nokia admits that Exhibit 3 to the Complaint purports to be a true and correct copy of U.S. Patent No. 10,715,235 (the "235 Patent") entitled "Directed Wireless Communications."

Nokia lacks knowledge or information sufficient to form a belief as to the truth of the remaining allegations of Paragraph 38, and therefore denies the same.

- 39. Nokia denies that Verizon has infringed any of the referenced claims of the '235 Patent through Verizon's use of Nokia equipment. To the extent this paragraph contains any additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.
- 40. Nokia denies that Verizon has infringed any of the referenced claims of the '235 Patent through Verizon's use of Nokia equipment. To the extent this paragraph contains any additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.
- 41. Nokia denies that Verizon has infringed any of the referenced claims of the '235 Patent through Verizon's use of Nokia equipment. To the extent this paragraph contains any additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.
- 42. Nokia admits that Exhibit 4 attached to the Complaint purports to be a claim chart related to the '235 Patent. Nokia denies the remaining allegations in Paragraph 42 of the Complaint.
- 43. Nokia denies that Verizon has infringed any of the referenced claims of the '235 Patent through Verizon's use of Nokia equipment. To the extent this paragraph contains any additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.
- 44. Nokia denies that Verizon has infringed any of the referenced claims of the '235 Patent through Verizon's use of Nokia equipment and therefore denies that Plaintiff is entitled to

any relief. To the extent this paragraph contains any additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.

- 45. Nokia denies the allegations in Paragraph 45 of the Complaint.
- 46. Nokia denies the allegations in Paragraph 46 of the Complaint.

COUNT III INFRINGEMENT OF U.S. PATENT NO. 10,594,376

- 47. No response is required to Plaintiff's reference and incorporation of the Paragraphs above. To the extent a response is deemed required, Nokia repeats and incorporates by reference, as if fully set forth herein, their answers to Paragraphs 1- 46, as set forth above.
- 48. Nokia admits that Exhibit 5 to the Complaint purports to be a true and correct copy of U.S. Patent No. 10,594,376 (the "'376 Patent") entitled "Directed Wireless Communications." Nokia lacks knowledge or information sufficient to form a belief as to the truth of the remaining allegations of Paragraph 48, and therefore denies the same.
- 49. Nokia denies that Verizon has infringed any of the referenced claims of the '376 Patent through Verizon's use of Nokia equipment. To the extent this paragraph contains any additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.
- 50. Nokia denies that Verizon has infringed any of the referenced claims of the '376 Patent through Verizon's use of Nokia equipment. To the extent this paragraph contains any additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.
- 51. Nokia denies that Verizon has infringed any of the referenced claims of the '376 Patent through Verizon's use of Nokia equipment. To the extent this paragraph contains any

additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.

- 52. Nokia admits that Exhibit 6 attached to the Complaint purports to be a claim chart related to the '376 Patent. Nokia denies the remaining allegations in Paragraph 52 of the Complaint.
- 53. Nokia denies that Verizon has infringed any of the referenced claims of the '376 Patent through Verizon's use of Nokia equipment. To the extent this paragraph contains any additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.
- 54. Nokia denies that Verizon has infringed any of the referenced claims of the '376 Patent through Verizon's use of Nokia equipment and therefore denies that Plaintiff is entitled to any relief. To the extent this paragraph contains any additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.
 - 55. Nokia denies the allegations in Paragraph 55 of the Complaint.
 - Nokia denies the allegations in Paragraph 56 of the Complaint. 56.

COUNT IV INFRINGEMENT OF U.S. PATENT NO. 7,177,369

- 57. No response is required to Plaintiff's reference and incorporation of Paragraphs above. To the extent a response is deemed required, Nokia repeats and incorporates by reference, as if fully set forth herein, their answers to Paragraphs 1-56, as set forth above.
- 58. Nokia admits that Exhibit 7 to the Complaint purports to be a true and correct copy of U.S. Patent No. 7,177,369 (the "'369 Patent") entitled "Multipath Communication Methods and

Apparatuses." Nokia lacks knowledge or information sufficient to form a belief as to the truth of the remaining allegations of Paragraph 58, and therefore denies the same.

- 59. Nokia denies that Verizon has infringed any of the referenced claims of the '369 Patent through Verizon's use of Nokia equipment. To the extent this paragraph contains any additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.
- 60. Nokia denies that Verizon has infringed any of the referenced claims of the '369 Patent through Verizon's use of Nokia equipment. To the extent this paragraph contains any additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.
- Nokia denies that Verizon has infringed any of the referenced claims of the '369 61. Patent through Verizon's use of Nokia equipment. To the extent this paragraph contains any additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.
- 62. Nokia admits that Exhibit 8 attached to the Complaint purports to be a claim chart related to the '369 Patent. Nokia denies the remaining allegations in Paragraph 62 of the Complaint.
- 63. Nokia denies that Verizon has infringed any of the referenced claims of the '369 Patent through Verizon's use of Nokia equipment. To the extent this paragraph contains any additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.
- 64. Nokia denies that Verizon has infringed any of the referenced claims of the '369 Patent through Verizon's use of Nokia equipment and therefore denies that Plaintiff is entitled to

any relief. To the extent this paragraph contains any additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.

- 65. Nokia denies the allegations in Paragraph 65 of the Complaint.
- 66. Nokia denies the allegations in Paragraph 66 of the Complaint.

COUNT V INFRINGEMENT OF U.S. PATENT NO. 9,289,939¹

- 67. No response is required to Plaintiff's reference and incorporation of Paragraphs above. To the extent a response is deemed required, Nokia repeats and incorporates by reference, as if fully set forth herein, their answers to Paragraphs 1-67, as set forth above.
- 68. Nokia denies that Exhibit 9 to the Complaint attaches a true and correct copy of U.S. Patent No. 9,289,939. Nokia admits that Exhibit 9 to the Complaint purports to be a true and correct copy of U.S. Patent No. 8,289,939 (the "'939 Patent") entitled "Signal Communication Coordination." Nokia lacks knowledge or information sufficient to form a belief as to the truth of the remaining allegations of Paragraph 68, and therefore denies the same.
- 69. Nokia denies that Verizon has infringed any of the referenced claims of the '939 Patent through Verizon's use of Nokia equipment. To the extent this paragraph contains any additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.
- 70. Nokia denies that Verizon has infringed any of the referenced claims of the '939 Patent through Verizon's use of Nokia equipment. To the extent this paragraph contains any

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¹ Nokia copies Plaintiff's Headings for ease of reference, but notes that the Asserted Patent is U.S. Patent No. 8,289,939, not 9,289,939.

additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.

- 71. Nokia denies that Verizon has infringed any of the referenced claims of the '939 Patent through Verizon's use of Nokia equipment. To the extent this paragraph contains any additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.
- Nokia admits that Exhibit 10 attached to the Complaint purports to be a claim chart 72. related to the '939 Patent. Nokia denies the remaining allegations in Paragraph 72 of the Complaint.
- 73. Nokia denies that Verizon has infringed any of the referenced claims of the '939 Patent through Verizon's use of Nokia equipment. To the extent this paragraph contains any additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.
- Nokia denies that Verizon has infringed any of the referenced claims of the '939 74. Patent through Verizon's use of Nokia equipment and therefore denies that Plaintiff is entitled to any relief. To the extent this paragraph contains any additional factual allegations, Nokia lacks knowledge or information sufficient to form a belief as to the truth of those allegations, and therefore denies the same.
 - 75. Nokia denies the allegations in Paragraph 75 of the Complaint.
 - 76. Nokia denies the allegations in Paragraph 76 of the Complaint.

PRAYER FOR RELIEF

These Paragraphs set forth the statement of relief requested by Plaintiff to which no response is required. Nokia denies that Plaintiff is entitled to any relief and specifically denies all the allegations and prayers for relief contained in Paragraphs (a) through (f) of Plaintiff's Prayer for Relief.

DEFENSES

Subject to the responses above, Nokia alleges and asserts the following defenses in response to the allegations, without admitting or acknowledging that Nokia bears the burden of proof as to any of them or that any must be pleaded as defenses. Nokia specifically reserves all rights to allege additional defenses that become known through the course of discovery.

FIRST DEFENSE (NO INFRINGEMENT)

1. Nokia equipment and technology supplied to Verizon has not infringed and does not infringe, either literally or under the doctrine of equivalents, any valid and enforceable claim of the Asserted Patents, in any manner including under any section of 35 U.S.C. § 271, including 35 U.S.C. §271(a), (b), and/or (c), willfully or otherwise. Verizon has not performed any act and are not proposing to perform any act in violation of any rights validly belong to Plaintiff.

SECOND DEFENSE (INVALIDITY)

2. The asserted claims of the Asserted Patents are invalid for failure to satisfy the requirements of 35 U.S.C. § 100, *et seq.*, including, but not limited to, one or more of the following: 35 U.S.C. §§ 101, 102, 103, and/or 112. For example, each claim is invalid in view of the references cited by the Examiner and arguments made by the Applicants during prosecution of the applications that issued as the Asserted Patents.

THIRD DEFENSE (NOTICE, DAMAGES, AND COSTS)

3. Plaintiff's claims for damages are statutorily limited under 35 U.S.C. §§ 252, 286, 287, or 307. To the extent Plaintiff or its licensees have failed to comply with the marking and

notice requirements of 35 U.S.C. § 287(a), Plaintiff's requested relief is barred, in whole or in part, for any damages arising from Verizon's alleged infringement prior to at least the date of the filing of the original Complaint or otherwise limited by 35 U.S.C. § 286.

- 4. Plaintiff is barred from recovering costs in connection with this action under 35 U.S.C. § 288.
- 5. Plaintiff's claims for relief are limited by the doctrines of full compensation, exhaustion, and/or first sale, and Plaintiff is not entitled to a double recovery.

FOURTH DEFENSE (PROSECUTION HISTORY ESTOPPEL)

6. Plaintiff's claims are barred by the doctrine of prosecution history estoppel based on statements, representations, and admissions made during the prosecution of the patent applications resulting in the Asserted Patents before the United States Patent and Trademark Office and/or during the prosecution of related patent applications.

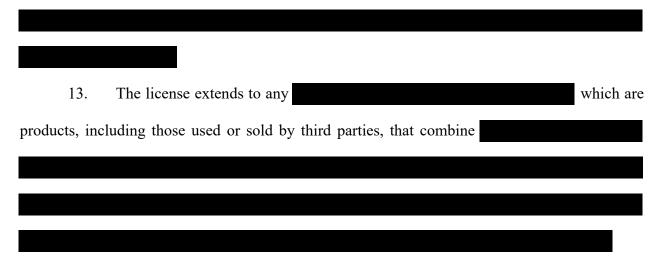
FIFTH DEFENSE (FAILURE TO STATE A CLAIM)

7. The Complaint fails to state a claim upon which relief can be granted.

SIXTH DEFENSE (LICENSE, IMPLIED LICENSE, AND/OR EXHAUSTION)

8. Plaintiff's claims for patent infringement are precluded in whole or in part (i) to the extent that any allegedly infringing products or components thereof are supplied, directly or indirectly, by any entity or entities having express or implied licenses or covenant not to sue or assert to the Asserted Patents and/or (ii) under the doctrine of patent exhaustion. Additionally, Plaintiff's claims for patent infringement are precluded in whole or in part to any direct licenses or agreements/covenants not to sue that pertain to Verizon or Nokia.

9. By way of non-limiting example, Plaintiff's claims for patent infringement ar
barred, in whole or in part, by a prior license entered into between Plaintiff and
for which was an Initial Licensee, the benefits of which inure to
customers and downstream manufacturers whose products incorporate
components, including Nokia's 5G base stations that are accused of infringement in this case.
10. On September 11, 2024, Plaintiff entered into a license agreement with
is identified in the license agreement in Exhibit A a
an "Initial Licensee." A copy of the license agreement was produced by Plaintiff at XR-EDTX1
00054791 (the "License").
11. As part of the License, Plaintiff granted to
" under the "Patents" t
and to Subsidiaries and
Third Parties,
12. The "Patents" under the License include each of the Patents-in-Suit in the
case, along with



- 14. At least some of Nokia's 5G base stations accused of infringement in this case constitute a because they incorporate chips fabricated by or its affiliates that are a under the License, and those chips contain functionality that is accused of satisfying a material element or a material step of a claim in the Asserted Patents.
- 15. Specifically, a number of the Asserted Claims of the Asserted Patents in this case require computation of information about received signals, and Nokia's 5G base stations are accused of performing these computations, including, for example, channel estimation of uplink received signals.
- 16. Further, a number of the Asserted Claims of the Asserted Patents in this case require "determin[ing] a set of weight values" based on these computations and using these weighting values to transmit signals. Nokia's 5G base stations are accused of computing these weighting values.
- 17. Further, a number of the Asserted Claims of the Asserted Patents are directed to "MIMO transceivers" that communicate with antenna arrays. Portions of Nokia's 5G base stations are accused of being these "MIMO transceivers" that communicate with antenna arrays.

- 18. Further, under Plaintiff's apparent theory of infringement, a number of the Asserted Claims of the Asserted Patents are directed to scheduling uplink and downlink transmissions. Portions of Nokia's 5G base stations are accused of making these scheduling decisions.
- 19. The chips fabricated by or its affiliates are responsible for these computations, including for channel estimation computations, weight computations, communication with antenna arrays, and scheduling. Thus, the chips are involved in all of the functionalities that Plaintiff alleges to be a material part of the functionality that infringes the claims. For at least that reason, the Nokia's base stations that incorporate this chip are a under the License.
- 20. Plaintiff's claims are therefore barred or limited to the extent they assert infringement by Nokia 5G base stations that qualify as a under the License.

SEVENTH DEFENSE (INEQUITABLE CONDUCT)

- 21. Plaintiff's enforcement of at least the '235 Patent, the '376 Patent, and the '939 Patent is barred by inequitable conduct, as follows:
- 22. The '235, '376, and '939 Patents all ultimately arose from applications originally filed in 2003 as Application Serial Numbers 10/700,329 for the '235 and '376 Patents and 10/700,342, for the '939 Patent.
- 23. By fall of 2007, the '329 and '342 applications were owned by Vivato Networks, Inc.
- 24. In December 2007, Vivato Networks merged with Catcher Holdings, Inc. ("Catcher"), and transferred the patent applications to Vivato Networks Holdings, Inc. ("Vivato Holdings"). Vivato Holdings granted Catcher the exclusive right to prosecute the applications. On

- April 1, 2008, Catcher ceased operations and terminated all employees due to a lack of working capital.
- 25. In late April or early May 2008, Brooks withdrew as the attorney of record for the '329 and '342 applications.
- 26. In June 2008, Aequitas Equipment Finance, LLC ("Aequitas"), assignee of Aequitas Capital's security interest in the applications, sought to foreclose on the '329 and '342 applications, each of which became abandoned between June and July 2008 for failure to respond to office actions from the United States Patent and Trademark Office ("USPTO").
- 27. In April 2009, Aequitas obtained a foreclosure judgment against Vivato Networks and Vivato Holdings, and took title of the abandoned applications through a sheriff's sale.
- 28. In fall 2009, Carl J. Schwedler, attorney for Aequitas, filed petitions to revive the '329 and '342 applications. As part of each of those petitions, Schwedler represented that the entire period of delay from the due date for filing a reply to the pending USPTO office actions to the date of the petitions, was unintentional under 37 C.F.R. § 1.137(b)(4).
- 29. Upon information and belief, Schwedler's representation that the delay in prosecuting the applications was unintentional was false.
- 30. The USPTO granted the petitions filed by Aequitas to revive the '342 application, but denied the petition to revive the '329 application. In December 2009, Aequitas sold its patent portfolio (including the revived '342 application and the still-abandoned '329 application) to Plaintiff XR.
 - 31. In 2010, XR took responsibility for prosecuting the patent applications.
- 32. On November 8, 2010, Daniel P. Burke, an attorney for XR, filed a renewed petition to revive the '329 application. In doing so, Burke represented to the USPTO that the entire period

of delay from the due date for filing a reply to the pending USPTO office action to the date of the petition was unintentional.

- 33. Upon information and belief, Burke's representation that delay in prosecuting the applications was unintentional was false, and XR itself would not have had knowledge of the circumstances surrounding the abandonment of the applications.
- 34. Upon information and belief, the delay that resulted in abandonment of the '329 and '342 applications was not unintentional.
- Upon information and belief, Aequitas and XR falsely certified that the entire 35. period of delay in replying to the PTO was unintentional.
- 36. Upon information and belief, the false representations that the entire period of delay in responding to the USPTO with respect to the '329, and '342 applications was unintentional were made with intent to deceive the USPTO into granting the petitions to revive. Specifically, upon information and belief, the following petitions to revive (and requests for reconsideration) contained knowingly false statements made with intent to deceive, and were material to the USPTO's decision to revive the applications and ultimately issue the Patents-in-Suit:
- The petition to revive the '329 application, filed on August 28, 2009 by a. Schwedler;
- The petition to revive the '342 application, filed on November 3, 2009 by b. Schwedler;
- The request for reconsideration of the dismissal of the petition to revive the c. '329 application, filed on November 18, 2009 by Schwedler; and
- The renewed petition to revive the '329 application, filed on November 8, d. 2010 by Burke.

- 37. Upon information and belief, the false representations that the entire period of delay in responding to the USPTO with respect to the '329 and '342 applications was unintentional were material to the USPTO, because without that false representation the USPTO would not have ultimately granted the petitions to revive and the '235, '376, and '939 Patents never would have issued.
- 38. Accordingly, upon information and belief, Aequitas, XR and their counsel engaged in inequitable conduct in reviving the '329 and '342 applications.

EIGHTH DEFENSE (STATUTORY LIMITATIONS)

39. To the extent certain equipment accused of infringing the Asserted Patents are used by and/or manufactured for the United States Government and/or public good, Plaintiff's claims involving Verizon or Nokia equipment or technology may not be pursued in this Court and are subject to other limitations pursuant to 28 U.S.C. § 1498.

NINTH DEFENSE (NO ENTITLEMENT TO INJUNCTIVE RELIEF)

40. XR is not entitled to injunctive relief. Under *eBay v. MercExchange*, LLC, 547 U.S. 388 (2006), any alleged injury to XR would not be immediate or irreparable, XR would have an adequate remedy at law, and the balance of hardships does not warrant injunctive relief.

RESERVATION OF DEFENSES

Nokia hereby reserves the right to supplement defenses as discovery proceeds in this case.

INTERVENOR NOKIA OF AMERICA CORPORATION'S COUNTERCLAIMS

Without admitting any of the allegations of the Complaint other than those expressly admitted herein, and without prejudice to the right to plead any additional counterclaims as the facts of the matter warrant, pursuant to Rule 13 of the Federal Rules of Civil Procedure, Nokia of

America Corporation ("Nokia") asserts the following counterclaims against Plaintiff XR Communications, LLC ("Plaintiff" or "XR"):

Parties

- 1. Intervenor Nokia is a Delaware Corporation with its principal place of business at 600-700 Mountain Avenue, Murray Hill, NJ 07974.
- 2. Upon information and belief, and according to the allegations in its Complaint, Plaintiff XR Communications, LLC is a Delaware limited liability company with a principal place of business at 2809 Ocean Front Walk, Venice, California 90291.
- 3. Plaintiff's Complaint alleges that it is the "sole owner by assignment of all right, title, and interest in each Asserted Patent."

Jurisdiction and Venue

- 4. This Court has subject matter jurisdiction over these counterclaims under 28 U.S.C. §§ 1331, 1338(a), 28 U.S.C. §§ 2201, 2202, and 35 U.S.C. §§ 271, et seq.
- 5. This Court has personal jurisdiction over Plaintiff because, among other reasons, Plaintiff has consented to jurisdiction by choosing to file claims for infringement of the Asserted Patents in this district.
- 6. Venue is proper in this district. Plaintiff has consented to venue in this district by bringing this action against Defendants, and thus venue for Nokia's counterclaims is proper in this district, although a different venue may be more convenient to hear the dispute.

Nature of the Action

7. Based on XR's Complaint, XR has substantial rights and interests in U.S. Patent Nos. 8,737,511 (the "'511 Patent"), 10,715,235 (the "'235 Patent"), 10,594,376 (the "'376 Patent"), 7,177,369 (the "'369 Patent"), and 8,289,939 (the "'939 Patent"), and collectively

referred to as the Asserted Patents.

- 8. Plaintiff has sued Nokia's customer, Verizon (as defined above) for alleged infringement of the Asserted Patents in Eastern District of Texas, Case No. 2:23-cv-00203 (the "Verizon Case").
- 9. Plaintiff's Complaint in the Verizon Case alleges infringement based, in part, upon functionality implemented by network equipment and technology supplied by Nokia to Verizon.
- 10. Nokia asserts that the Asserted Patents are invalid for failure to satisfy the requirements of 35 U.S.C. § 100, *et seq.*, including, but not limited to, one or more of the following: 35 U.S.C. §§ 101, 102, 103, and/or 112.
- 11. Nokia further denies that Verizon has infringed the Asserted Patents, directly or indirectly, through Verizon's use of Nokia equipment or technology.
- 12. In view of the foregoing, a conflict of asserted rights between Nokia and Plaintiff with respect to the alleged infringement and validity of the Asserted Patents.

First Counterclaim Declaratory Judgment of Non-Infringement of the '511 Patent

- 13. Nokia incorporates by reference the prior allegations.
- 14. Plaintiff alleges that Verizon infringes the '511 Patent through the use of Nokia's equipment and technology in its wireless network.
- 15. An actual, substantial, and continuing justiciable controversy exists between Nokia and Plaintiff with respect to infringement of the '511 Patent.
- 16. Nokia's equipment and technology does not infringe and has not infringed any valid claim of the '511 Patent literally, directly, indirectly (such as contributorily or by way of inducement), willfully, or under the doctrine of equivalents.

- 17. There exists an actual and justiciable controversy, within the meaning of 28 U.S.C. §§ 2201 and 2202, between Nokia and Plaintiff as to whether the Nokia's equipment and technology has infringed or infringes any valid and enforceable claim of the '511 Patent.
- 18. Nokia requests a judicial determination and declaration that Nokia's equipment and technology does not infringe any valid and enforceable claim of the '511 Patent.

Second Counterclaim Declaratory Judgment of Non-Infringement of the '235 Patent

- 19. Nokia incorporates by reference the prior allegations.
- 20. Plaintiff alleges that Verizon infringes the '235 Patent through the use of Nokia's equipment and technology in its wireless network.
- 21. An actual, substantial, and continuing justiciable controversy exists between Nokia and Plaintiff with respect to infringement of the '235 Patent.
- 22. Nokia's equipment and technology does not infringe and has not infringed any valid claim of the '235 Patent literally, directly, indirectly (such as contributorily or by way of inducement), willfully, or under the doctrine of equivalents.
- 23. Accordingly, there exists an actual and justiciable controversy, within the meaning of 28 U.S.C. §§ 2201 and 2202, between Nokia and Plaintiff as to whether the Nokia's equipment and technology has infringed or infringes any valid and enforceable claim of the '235 Patent.
- 24. Nokia requests a judicial determination and declaration that Nokia's equipment and technology does not infringe any valid and enforceable claim of the '235 Patent.

<u>Third Counterclaim</u> **Declaratory Judgment of Non-Infringement of the '376 Patent**

25. Nokia incorporates by reference the prior allegations.

- 26. Plaintiff alleges that Verizon infringes the '376 Patent through the use of Nokia's equipment and technology in its wireless network.
- 27. An actual, substantial, and continuing justiciable controversy exists between Nokia and Plaintiff with respect to infringement of the '376 Patent.
- 28. Nokia's equipment and technology in a wireless network does not infringe and has not infringed any valid claim of the '376 Patent literally, directly, indirectly (such as contributorily or by way of inducement), willfully, or under the doctrine of equivalents.
- 29. Accordingly, there exists an actual and justiciable controversy, within the meaning of 28 U.S.C. §§ 2201 and 2202, between Nokia and Plaintiff as to whether the Nokia's equipment and technology has infringed or infringes any valid and enforceable claim of the '376 Patent.
- 30. Nokia requests a judicial determination and declaration that Nokia's equipment and technology does not infringe any valid and enforceable claim of the '376 Patent.

Fourth Counterclaim Declaratory Judgment of Non-Infringement of the '369 Patent

- 31. Nokia incorporates by reference the prior allegations.
- 32. Plaintiff alleges that Verizon infringes the '369 Patent through the use of Nokia's equipment and technology in its wireless network.
- 33. An actual, substantial, and continuing justiciable controversy exists between Nokia and Plaintiff with respect to infringement of the '369 Patent.
- 34. Nokia's equipment and technology does not infringe and has not infringed any valid claim of the '369 Patent literally, directly, indirectly (such as contributorily or by way of inducement), willfully, or under the doctrine of equivalents.

- 35. Accordingly, there exists an actual and justiciable controversy, within the meaning of 28 U.S.C. §§ 2201 and 2202, between Nokia and Plaintiff as to whether the Nokia's equipment and technology has infringed or infringes any valid and enforceable claim of the '369 Patent.
- 36. Nokia requests a judicial determination and declaration that Nokia's equipment and technology does not infringe any valid and enforceable claim of the '369 Patent.

Fifth Counterclaim Declaratory Judgment of Non-Infringement of the '939 Patent

- 37. Nokia incorporates by reference the prior allegations.
- 38. Plaintiff alleges that Verizon infringes the '939 Patent through the use of Nokia's equipment and technology in its wireless network.
- 39. An actual, substantial, and continuing justiciable controversy exists between Nokia and Plaintiff with respect to infringement of the '939 Patent.
- 40. Nokia's equipment and technology does not infringe and has not infringed any valid claim of the '939 Patent literally, directly, indirectly (such as contributorily or by way of inducement), willfully, or under the doctrine of equivalents.
- 41. Accordingly, there exists an actual and justiciable controversy, within the meaning of 28 U.S.C. §§ 2201 and 2202, between Nokia and Plaintiff as to whether the Nokia's equipment and technology, either alone or as used in a wireless network, has infringed or infringes any valid and enforceable claim of the '939 Patent.
- 42. Nokia requests a judicial determination and declaration that Nokia's equipment and technology does not infringe any valid and enforceable claim of the '939 Patent.

PRAYER FOR RELIEF

WHEREFORE, Nokia prays for judgment as follows:

- a. A declaration that Verizon has not infringed the Asserted Patents through Verizon's use of Nokia equipment and/or technology, contributed to the infringement of any of the Asserted Patents, and/or induced others to infringe any of the Asserted Patents;
 - b. A judgment in favor of Nokia on all of its Defenses;
- c. A judgment denying any relief whatsoever, including but not limited to injunctive relief, in favor of Cobblestone;
 - d. A judgment in favor of Nokia on its Counterclaims;
- e. A judgment that the claims of each of the Asserted Patents are invalid and/or unenforceable;
- f. A judgment that this action is exceptional within the meaning of 35 U.S.C. § 285 and an award of attorney's fees and expenses of litigation to Nokia;
 - g. Such other and further relief as this Court may deem just and proper.

DEMAND FOR JURY TRIAL

In accordance with Rule 38 of the Federal Rules of Civil Procedure and Local Rule CV-38, Intervenor Nokia respectfully demand a jury trial of all issues triable to a jury in this action.

Dated: November 19, 2024 Respectfully submitted,

/s/ Matthew S. Yungwirth
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Counsel for Intervenor Nokia of America Corporation.

CERTIFICATE OF SERVICE

The undersigned certifies that all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system per Local Rule CV-5(a)(3) on November 19, 2024.

/s/ Matthew S. Yungwirth

Matthew S. Yungwirth